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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,693	02/06/2002	Yutaka Nakazawa	8013-1005	5640

466 7590 05/17/2005

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EXAMINER
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NGUYEN, DANNY

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/066,693	<b>Applicant(s)</b> NAKAZAKA ET AL.	
	<b>Examiner</b> Danny Nguyen	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-6,9-11,14,15 and 17 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,9-11,14,15 and 17 is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 4/12/2005 with respect to claims 1, 6, and 11 have been fully considered and are persuasive. In view of these arguments, Claims 6 and 11 are allowed. Claim 1 is moot in view of the new ground(s) of rejection. Therefore, the final rejection has been withdrawn.
2. Claims 3, 7, 8, 12, 13, 16, and 18-20 are cancelled.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (USPN 5,796,574) in view of Bendale et al (USPN 6,631,074). Saito discloses an electric double layer capacitor comprises electrodes which include activated carbon powder (such as col. 7, lines 28-38), a binder for binding the activated carbon powder (col. 1, lines 30-33), an electrolytic solution (e.g. col. 5, lines 20-25), wherein an averaged diameter of the activated carbon powder is in the range of 5 micrometers to 13 micrometers (col. 7, line 28). Saito does not disclose a particle size distribution of the activated carbon powder as claimed. Bendale discloses an electric double layer capacitor comprises a particle size distribution of the activated carbon powder is in the range of 2 micrometers to 20 micrometers (col. 8, lines 1-3). It would

have been obvious to one of ordinary skill in the art at the time the invention was made to have modified to activated carbon power of Saito to incorporate the particle size distribution which has the above range as disclosed by Bendale in order to provide efficiently packing density (col. 8, lines 3-4).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya et al in view of Bendale, and Andelman (USPN 6,127,474). Saito and Bendale disclose all limitations as discussed above in claim 1, but do not disclose the electrodes have the specific resistance as claimed. However, providing a capacitor with an electrode resistance of 1-10 ohm cm is well known in the art. Selecting the exact valued of the electrode resistance is based upon the design constraints imposed by the system in which the capacitor id designed to be used in. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the specific resistance of electrodes of Saito and Bendale to incorporate the specific resistance within 2-7 ohm cm based upon such design constraints because this is a known range of electrode resistance as taught by Andelman (col. 7, lines 21-23).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya et al in view of Bendale, and Gan et al (USPN 6,171,729). The combination of Saito and Bendale disclose a binder for binding the activated carbon particles, but do not disclose the binder as claimed. Gan discloses a double layer capacitor circuit comprise a binder that contains materials such as polyvinylidene fluoride (e.g. see col. 4, lines 14-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the binder Saito and Bendale to incorporate the binder that

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contains materials such as polyvinylidene fluoride as taught by Gan in order to improve conductivity.

***Allowable Subject Matter***

6. Claims 6, 9-11, 14, 15, 17 are allowed.

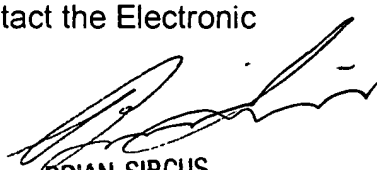
***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (571)-272-2054. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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5/5/2005

  
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